



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,788	10/10/2005	Guido Becker	ETF-0033	4530
23413	7590	12/26/2007	EXAMINER	
CANTOR COLBURN, LLP			NGUYEN, PHUNG	
20 Church Street			ART UNIT	
22nd Floor			PAPER NUMBER	
Hartford, CT 06103			2612	
			MAIL DATE	DELIVERY MODE
			12/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,788

Applicant(s)

BECKER ET AL.

Examiner

Phung T. Nguyen

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35-50 is/are allowed.
- 6) ☒ Claim(s) 17-34 is/are rejected.
- 7) ☒ Claim(s) 51 and 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al. (US 6,564,123) in view of Tanaka et al. (US 7,053,794).

Regarding claim 17: Hahn et al. disclose recording of ambient data in an external area of a vehicle, and evaluation of a suitability of the specific area as a parking space taking into account the calculated dimensions and known, vehicle-specific reference values, wherein the recording of ambient data comprises recording three-dimensional images of surroundings by means of an optical 3-D system (col. 3, lines 37-50, and col. 4, lines 18-28). Hahn et al. teach calculating the data (col. 6, lines 28-34) but do not specially teach calculation of dimensions of a specific area using the recorded ambient data. However, Tanaka et al. disclose parking assist device and method for assisting parking which comprises calculating the potential parking spot (col. 2, lines 16-29, and col. 7, lines 41-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the technique of Tanaka et al. in the system of Hahn et al. in order to park the vehicle safely in the parking space.

Regarding claim 18: Hahn et al. disclose wherein said optical 3-D system comprises a 3-D camera (col. 4, lines 18-28).

Regarding claim 19: Hahn et al. disclose wherein the recording of ambient data comprises the recording a situation image of the entire area of interest (col. 4, lines 34-38).

Regarding claim 20: Hahn et al. disclose wherein the recording of ambient data comprises the successive recording of adjacent component images of the area of interest (col. 3, lines 29-35).

Regarding claim 21: Hahn et al. disclose wherein a topographical image of the specific area is created on the basis of the recorded ambient data (col. 4, lines 18-26).

Regarding claim 22: Hahn et al. disclose wherein an obstacle in the specific region is detected on the basis of the recorded surroundings (col. 3, lines 29-35).

Regarding claim 23: Hahn et al. disclose wherein a result of the evaluation step is signaled to a driver of the vehicle (col. 3, lines 36-42).

Regarding claim 24: Hahn et al. disclose wherein, in addition to the calculation of the dimensions of the specific area, the position of the specific area with respect to the vehicle is determined on the basis of the recorded ambient data (col. 4, lines 34-38).

Regarding claim 25: Hahn et al. disclose wherein the calculated dimensions and position of the specific area are transmitted to a control system for an automatic parking system (col. 1, lines 60-67, and col. 2, lines 1-7).

Regarding claim 26: All the claimed subject matter is already discussed in respect to claim 17 above.

Regarding claim 27: Refer to claim 18 above.

Regarding claim 28: Refer to claim 24 above.

Regarding claim 29: Tanaka et al. teach wherein the evaluation circuit determines the dimensions of the specific area on the basis of a plurality of successively recorded component images of the area of interest, wherein the various component images are correlated with one another by way of a determined vehicle velocity (col. 1, lines 56-67).

Regarding claim 30: Hahn et al. disclose wherein the sensor device operates in the infrared range (col. 2, lines 59-63).

Regarding claim 31: Refer to claim 23 above.

Regarding claim 32: Hahn et al. inherently disclose wherein the evaluation unit has means for determining the position of the specific area with respect to the vehicle (col. 3, lines 29-35).

Regarding claim 33: Refer to claim 25 above.

Regarding claim 34: Hahn et al. disclose wherein the optical 3-D sensor system is mounted on the vehicle, in the external area of the vehicle col.2, lines 33-36).

Allowable Subject Matter

3. Claims 51 and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. Claims 35-50 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claims 35, 43, 51, and 52, patentability resides in "eliminating a background from the three-dimensional images on account of the rear boundary", in combination with the other limitations of the claim.

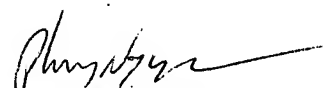
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung T Nguyen whose telephone number is 571-272-2968. The examiner can normally be reached on 8:00am-4:30pm Mon thru. Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on 571-272-2964. The fax numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Date: December 14, 2007


PHUNG T. NGUYEN
PRIMARY EXAMINER